

1                   **ABSTRACT**  
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3           An implementation of a technology is described herein that facilitates rights  
4 enforcement of digital goods using watermarks. More particularly, it is a  
5 fingerprinting technology for protecting digital goods by detecting collusion as a  
6 malicious attack and identifying the participating colluders. If a digital pirate  
7 breaks one client and enables this client to avoid watermark detection, all content  
8 (both marked/protected and unmarked/free) can be played as unmarked only on that  
9 particular client. However, to enable other clients to play content as unmarked, the  
10 digital pirate needs to collude the extracted detection keys from many clients in  
11 order to create content that can evade watermark detection on all clients. The  
12 described implementation significantly improves collusion resistance through a  
13 fingerprinting mechanism that can identify the members of a malicious coalition  
14 even when their numbers are several orders of magnitude greater than what  
15 conventional collusion-protection schemes can accomplish. However, in this  
16 scenario each member of the malicious coalition leaves a fingerprint in every  
17 digital good from which the estimated watermark is subtracted. [DK1] Thus, like a  
18 burglar without gloves, the digital pirate leaves her fingerprints only when she  
19 commits a crime. This abstract itself is not intended to limit the scope of this  
20 patent. The scope of the present invention is pointed out in the appending claims.  
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